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Listing of Claims

1. (previously presented) A method for analyzing a data storage apparatus containing a transducer head positionable adjacent a data storage media surface, the method comprising:

- (a) detecting a defective region of the surface; and
- (b) imaging a characteristic size of the defective region by combining a plurality of readback signals each received during a respective pass of the transducer head adjacent the defective region.

2. (previously presented) The method of claim 1 comprising:

- (c) categorizing the defective region by comparing the characteristic size of the defective region to a plurality of predefined category profiles.

3. (canceled)

4. (previously presented) The method of claim 2 wherein the categorizing step comprises identifying the defective region as likely being characteristic of a scratch.

5. (previously presented) The method of claim 2 in which the characterizing step comprises indicating that the defective region is unreliable if a ratio defined by a size of a portion of the defective region with a less-than-expected readback signal strength compared to a total size of the defective region is greater than a preselected threshold.

6. - 7. (canceled)

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8. (previously presented) The method of claim 1 wherein the imaging step comprises representing an array of data points each having independent coordinates X and Y corresponding unique locations on the data storage media.

9. (previously presented) The method of claim 8 wherein the imaging step comprises representing an array of data points wherein each X and Y coordinate is associated with a corresponding Z coordinate relating to a strength of the readback signal.

10. (previously presented) The method of claim 2 wherein the categorizing step comprises identifying the defective region as likely being characteristic of corrosion.

11. (previously presented) The method of claim 1, further comprising:

- (c) modifying a list of bad sectors in a manner that depends upon the imaging step; and
- (d) retaining the modified list in the data storage apparatus.

12. (original) A data storage apparatus containing a list of bad sectors that is modified according to the method of claim 11.

13. (previously presented) The method of claim 2, further comprising:

- (d) assigning a value to each of the defective regions according to the categorizing step; and
- (e) reworking the data storage apparatus if an aggregation of the assigned values exceeds a predetermined threshold.

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14. (canceled)

15. (previously presented) The method of claim 13 in which the conditional reworking step (e) further comprises:

- (e1) also performing the steps (a)-(c) upon a multiplicity of other data storage devices;
- (e2) identifying a recurring category common to a subset of the multiplicity of data storage devices;
- (e3) disassembling a minority of the subset of the data storage devices; and
- (e4) deriving the predetermined threshold based upon analysis of the disassembled data storage device(s).

16. (canceled)

17. (previously presented) The method of claim 1 in which the imaging step (b) comprises receiving all of the plurality of readback signals from the transducer head while the data storage apparatus is sealed.

18. - 24. (canceled)

25. (original) A data storage apparatus comprising:
a media surface containing a defective region;
a transducer head positionable adjacent the surface; and
means for assigning a category for the defective region by
combining a plurality of readback signals each received during a
respective pass of the transducer head adjacent the defective
region.

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26. (previously presented) The apparatus of claim 25 in which the means for assigning comprises defining a profile for each of at least 3 categories defining a set that includes the category assigned for the defective region.

27. (previously presented) The apparatus of claim 25 in which the means for assigning is completed while the combination of readback signals has been compared against at most 30 profiles each corresponding to a respective category, the assigned category being one of the respective categories.

28. (previously presented) The apparatus of claim 25 in which the means for assigning comprises a category identifier indicating whether the defective region is likely to contain a scratch.

29. (previously presented) The apparatus of claim 25 in which the means for assigning comprises means for generating a topographical image of the defective region of the media surface.

30. (previously presented) The apparatus of claim 25 in which the means for assigning is configured to receive all of the plurality of read signals from the transducer head while the media storage and transducer head are sealed in a substantially opaque chamber.

31. (previously presented) The method of claim 4 wherein the categorizing step identifies the defective region as likely being characteristic of a scratch if the characteristic size comprises a length that is greater than a width by a factor of about 2.5.

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32. (previously presented) A media defect analysis apparatus comprising:

a read/write head adapted for writing data to and reading data from the media; and

a controller coupled to the read/write head categorizing a defective region of the media by combining a plurality of readback signals each received during a respective pass of the read/write head adjacent the defective region and imaging a characteristic size of the defective region.

33. (previously presented) The apparatus of claim 32 comprising a memory storing a plurality of predefined profiles associated with likely types of defects associated with respective characteristic sizes of the defective region.

34. (previously presented) The apparatus of claim 33 wherein the predefined profiles comprises a characteristic size associated with the defective region likely being characteristic of a scratch.

35. (previously presented) The apparatus of claim 34 wherein the characteristic size comprises a length that is greater than a width by a factor of about 2.5.

36. (previously presented) The apparatus of claim 33 wherein the predefined profiles comprises a characteristic size associated with the defective region likely being unreliable for data storage.

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37. (previously presented) The apparatus of claim 36 wherein the characteristic size comprises a ratio defined by a size of a portion of the defective region with a less-than-expected readback signal strength compared to a total size of the defective region being greater than a preselected threshold.

38. (previously presented) The apparatus of claim 32 wherein the controller images an array of data points each having independent coordinates X and Y corresponding to unique locations on the data storage media.

39. (previously presented) The apparatus of claim 38 wherein the controller images an array of data points wherein each X and Y coordinate is associated with a corresponding Z coordinate relating to a strength of the readback signal.

40. (previously presented) The apparatus of claim 33 wherein the predefined profiles comprises a characteristic size associated with the defective region likely being characteristic of corrosion.

41. (previously presented) The apparatus of claim 32 further comprising a memory storing a location of the defective region.

42. (previously presented) The apparatus of claim 32 comprising a data storage device.